

ABSTRACT

In a first aspect of the present invention, a method of fabricating a flash memory device is disclosed. The method comprises the steps of providing a portion of a dual gate oxide in a periphery area of the memory device and then simultaneously providing a dual gate oxide in a core area of the memory device and completing the dual gate oxide in the periphery area. Finally, a nitridation process is provided in both the core and periphery areas subsequent to the previous steps. In a second aspect of the present invention, a flash memory device is disclosed. The flash memory device comprises core area having a plurality of memory transistors comprising an oxide layer, a first poly layer, an interpoly dielectric layer, and a second poly layer. The flash memory device further comprises a periphery area having a plurality of transistors comprising an oxide layer, a portion of the first poly layer, and the second poly layer. According to the present invention, the method for fabricating the flash memory device is a simplified process that results in a significant improvement in the oxide reliability in the core and periphery areas and also eliminates the nitrogen contamination problem in the periphery area.